



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,961	07/24/2001	Kwok-Shun Cheng	MCA-422-PC/U	5752

7590 01/08/2004

Mykrolis Corporation
129 Concord Road
Billerica, MA 01821-4600

EXAMINER

FORTUNA, ANA M

ART UNIT	PAPER NUMBER
----------	--------------

1723

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 09/889,961	Applicant(s) CHENG ET AL.	
	Examiner Ana M Fortuna	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3, 4, 5, 6, 7, 8-10, 12, are rejected under 35 U.S.C. 102(a) as being anticipated by Stanley Kidd et al (WO 00/61267)(hereinafter '267). Reference '267 discloses hollow fiber membrane made of perfluorinated thermoplastic comprising a skin and a porous surface on the opposite diameter, e.g. asymmetric hollow fibers made from amorphous fluorinated polymers (page 2, lines 23-29, page 3, lines 1-9, and lines 20-68, through page 4, lines 1-9). The membrane with the fiber structure, and asymmetric is disclosed in page 5, lines 20-27). '267 also discloses the membrane as porous on its surface having a diameter of about 0.01 to 100 micrometers, and pores of less than 0.1 micrometers, the integral membrane also can be made with pores of about 0.1 to about 0.05, which covers ranges claimed in claims 3, 4, 6, 7, 8, 9, 12. The membranes are also defined by '267 as reverse osmosis, ultrafiltration and nanofiltration membranes (page 5, second paragraph). As to claims 6 and 7, membranes within the reverse osmosis/Ultrafiltration range of pore size inherently possesses the claimed molecular weight cut-off claimed in claims 6 and 7. As to claim 5, the membrane having the skin and porous surface is inherently an asymmetric membrane which by definition has low porosity on one of the surface and larger pores, increasing from the low pore size surface to the second surface. As to the properties of the membrane of claim 5, for separating species dissolved in a liquid, e.g. water,

Art Unit: 1723

that property is also inherent of reverse osmosis membranes, due to their low pore size. The membrane as integral or as supported membrane having a large pore size support, e.g. About 10 microns.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 2, 10, 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Moya (6,179,132)(hereinafter '132). Reference '132 discloses coating a membrane, having hollow fiber support, the support is microporous having isotropic configuration, which includes lower pore size at the surface and larger pore size at the other surface, coating with a film of perfluoropolymer (column 12, lines 32-64). Formation of nonporous film e.g. to reparation non porous film is disclosed as conventional(column 4, lines 22-43).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley Kidd et al (WO 00/61267)(hereinafter '267). Reference '267 discussed in the paragraph above fails to disclose the membrane porosity in term of bubble point as claimed in claims 15 and 16, however, a range of pore size for the membrane that fits within the bubble point or psi (pressure)

Art Unit: 1723

with isopropyl alcohol is disclosed, e.g. RO-MF pore size (page 5, second paragraph). A membrane with the claimed bubble point values as claimed in claims 15-16, it would have been expected by the skilled in the art at the time the invention was made, to be a porous membrane, and further a membrane with pore size within the range claimed in '267, since reference '267 includes a very wide range of pore sizes, which covers RO-MF membranes.

Allowable Subject Matter

5. Claims 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The membrane with the claimed properties, and made from the copolymers claimed in the above claims is not disclosed or suggested in the prior art of record.

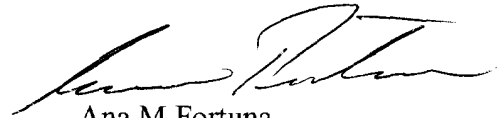
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Application/Control Number: 09/889,961
Art Unit: 1723

Page 5

A handwritten signature in black ink, appearing to read 'Ana M Fortuna', written in a cursive style.

Ana M Fortuna
Primary Examiner
Art Unit 1723

AMF
December 15, 2003